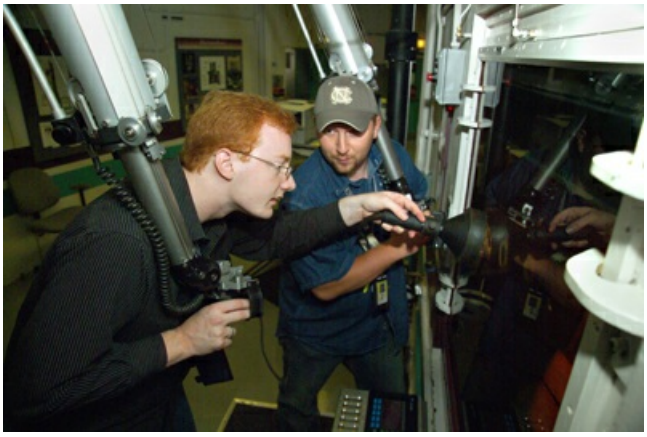

Jonathon Hamilton (here with INL operator Travis Killian), was one of 10 university engineering students participating in a summer internship program through INL's Advanced Test Reactor National Scientific User Facility.

Students receive in-depth look at nuclear reactor operations

by John Walsh, *INL Communications*

Ten university engineering students are receiving an in-depth look at the operation of a nuclear plant this summer from June 2 to Aug. 7. They are working and learning at the Advanced Test Reactor Complex and Materials & Fuels Complex at Idaho National Laboratory.

The students are at INL through the Advanced Test Reactor (ATR) National Scientific User Facility Nuclear Operations Internship Program. Steve Falley, Nuclear Operations instructor and internship program coordinator, said, "What we hope to give them is a really good picture of what a plant is and how it operates."

Each of the students hails from a different school: Idaho State University, University of Idaho, Utah State University, University of Florida, Georgia Institute of Technology, Oregon State University, University of Michigan, Iowa State University, Texas A&M and Penn State University.

Falley said the curriculum is broad and will give students both classroom work and hands-on experience. "One of the biggest benefits is they're working with operations and engineering mentors. The students are learning that nuclear reactors are complicated, so they started out with some classroom overview training and radiation worker training. But, they also are getting a lot of hands-on work on projects and observing various operations. We want them to be involved as much as possible," he said.

Gable Roth -- a Utah State University senior from Ammon, Idaho -- learns to control a fan system at the Fuel Conditioning Facility from a computer console.

During their 10 weeks, the students will participate in actual reactor operations using the Advanced Test Reactor Critical facility. They will also be on the reactor top of the ATR observing the movement of fuel assemblies, performing fire system pump curve calculations, observing pump maintenance activities, and even learning about the pipe seismic protection hanger requirements. In addition, they will spend about two weeks at the Materials & Fuels Complex, where they'll be involved in nuclear operations activities such as post-irradiation examination.

They will spend about 20 hours in the ATR training simulator learning how to control a reactor, experience some of the decisions an operator has to make, and perhaps responding to a simulated reactor scram.

Falley said the curriculum was based around the expertise of Nuclear Operations' trainers and Operations managers.

"We wanted to expose them to how a nuclear plant works, to help them understand that our operations are formal, run by procedures, require a lot of training, and that there is a lot of safety analysis associated with our work. They will see how operations and engineering staffs work closely together to enable the ATR to achieve its mission," he added.

The internship program has several "drivers" for the program: support of the U.S. Department of Energy's goal to promote nuclear power in the United States, reaching out to universities to involve them in the National Scientific User Facility and, possibly, attracting some young engineers to INL Nuclear Operations.

Feature Archive